a second electromagnetic signal comprising at least a second photon emission event occurring after 10 nanoseconds of the excitation event that caused the second photon emission event.

**3**. A method as in claim **1**, wherein the first photon emission event comprises an emission produced by an emissive species having an excited state lifetime of less than or equal to 10 nanoseconds.

**4**. A method as in claim **1**, wherein the second photon emission event comprises an emission produced by an emissive species having an excited state lifetime of at least 10 nanoseconds.

**5-6**. (canceled)

**7**. A system, comprising:

an excitation component configured to excite a first emissive species such that the first emissive species produces a detectable steady-state photon emission signal;

the excitation component is configured to excite a second emissive species such that the second emissive species produces a detectable non-steady-state photon emission signal; and

a sensor configured to detect at least a portion of the detectable steady-state photon emission signal and at least a portion of the detectable non-steady-state emission signal.

**8**. A system as in claim **7**, further comprising an electronic hardware component configured to combine the detectable steady-state emission and the detectable non-steady-state emission into a determinable signal.

**9**. A system as in claim **7**, wherein the detectable steady-state emission and/or the detectable non-steady-state emission correspond to a characteristic of the first emissive species and/or the second emissive species.

**10**. A system as in claim **7**, wherein the signal corresponds to a quantity of a target biological species.

**11**. A system as in claim **7**, wherein at least one emission is selected from the group consisting of subtractive color, reflected/scattered color, chemiluminescence, prompt-fluorescence, delayed-fluorescence, prompt-phosphorescence, or delayed-phosphorescence.

**12**. A system as in claim **7**, wherein the first electromagnetic radiation signal is a colorimetric signal and the second electromagnetic radiation signal is a prompt-fluorescence signal.

**13**. A system as in claim **7**, wherein the first electromagnetic radiation signal is a colorimetric signal and the second electromagnetic radiation signal is a delayed-fluorescence signal.

**14**. A system as in claim **7**, wherein the first electromagnetic radiation signal is a colorimetric signal and the second electromagnetic radiation signal is a prompt-phosphorescence signal.

**15**. A system as in claim **7**, wherein the first electromagnetic radiation signal is a colorimetric signal and the second electromagnetic radiation signal is a delayed-phosphorescence signal.

**16**. A system as in claim **7**, wherein the first electromagnetic radiation signal is a colorimetric signal and the second electromagnetic radiation signal is a chemiluminescence signal.

**17**. A system as in claim **7**, wherein the first electromagnetic radiation signal is a prompt-fluorescence signal and the second electromagnetic radiation signal is a delayed-phosphorescence signal.

**18**. A system as in claim **7**, wherein at least one signal is collected in a steady-state mode and at least one other signal is collected using a time synchronized light source.

**19**. A system as in claim **7**, wherein at least one signal is collected when a time synchronized electromagnetic radiation source is off and at least another signal is collected when a time synchronized electromagnetic radiation source is on.

**20**. A system as in claim **7**, wherein at least one signal is collected while the assay is illuminated by one or more LED light sources.

**21**. A system as in claim **7**, wherein the excitation event is a source of electromagnetic radiation.

**22**. A system as in claim **21**, wherein the source of electromagnetic radiation comprises a flash from a smartphone or digital camera.

**23-33**. (canceled)

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